

BIRLA INSTITUTE OF TECHNOLOGY, MESRA, RANCHI
(MID SEMESTER EXAMINATION)

CLASS: B.TECH.
BRANCH: BIOTECHNOLOGY

SEMESTER : III/ADD
SESSION : MO/2025

SUBJECT: BE24242 MICROBIOLOGY

TIME: 02 HOURS

FULL MARKS: 25

INSTRUCTIONS:

1. The question paper contains 5 questions each of 5 marks and total 25 marks.
 2. Attempt all questions.
 3. The missing data, if any, may be assumed suitably.
 4. Tables/Data handbook/Graph paper etc., if applicable, will be supplied to the candidates
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		CO	BL
Q.1(a)	What is the scope of microbiology?	[2] 1	1
Q.1(b)	Describe a compound microscope with the aid of a labelled diagram.	[3] 2	2
Q.2(a)	What is sterilization? How is it different from disinfection?	[2] 1	2
Q.2(b)	Why do we need to stain cells? Discuss the different types of stains along with their examples.	[3] 3	3
Q.3(a)	What do you mean by pure culture? Why is pure culture important?	[2] 1	1
Q.3(b)	What are the different types of culture media? Give examples	[3] 2	2
Q.4(a)	What are archaebacteria?	[2] 1	1
Q.4(b)	With the help of a neat and labelled diagram describe the structure of a bacteria and give their classification based on their shapes with examples.	[3] 2	2
Q.5(a)	What do you mean by synchronous culture?	[2] 1	1
Q.5(b)	Describe growth curve. Aman neglects to wash his hands before preparing potato salad. He mistakenly contaminates the salad with 12,000 Salmonella cells. How many bacteria will be present in 12 hours if the generation time is 15 minutes (assume unlimited growth)?	[3] 3	3

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